

# Update on IFO Power Increase at Livingston

Valera Frolov Andri Gretarsson

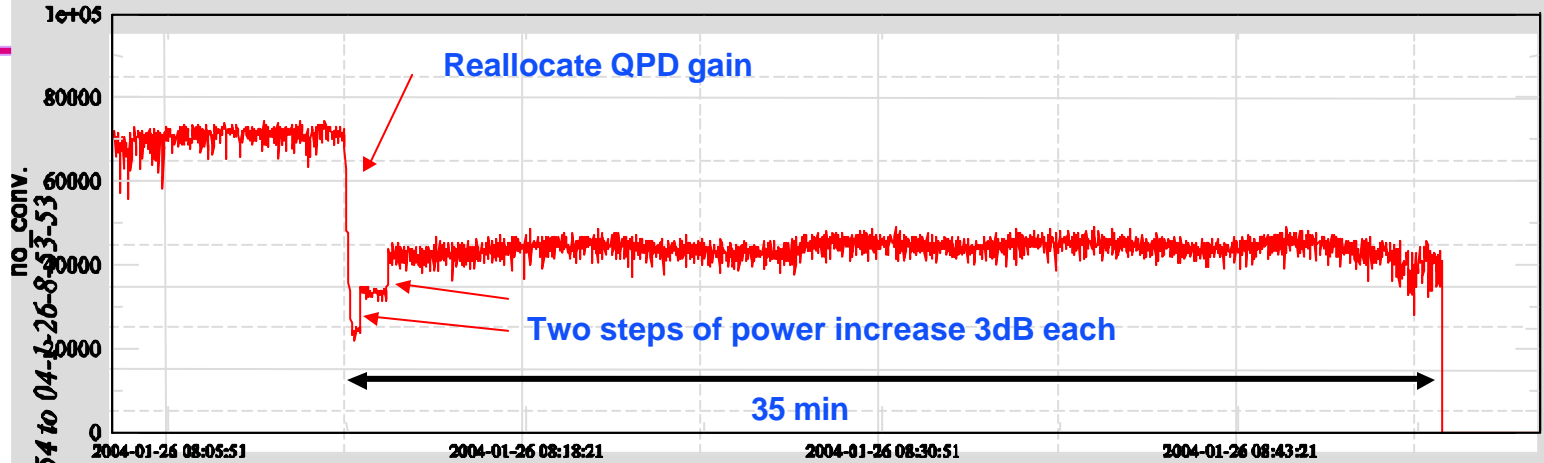
- IFO nominal power into the MC is 1.8W. Available power is 4.0W.
- Increased the input power by turning the wave plate.
- Compensated the MC reflected light with EOS.
- Input matrix is calculated automatically but REFL->CARM is fixed.
- Common Mode servo gain is compensated with the gain stage which is common to both high and low frequency path. Limited to steps of 3dB.
- MC WFS was dc coupled to prevent the MC from twisting.
- The arm power scales with input power.
- The sideband power depends on misalignment due to radiation pressure.
- Spent most of the time trying to figure out how to compensate the misalignment – DC oplev, WFS2, manually
- No obvious signs of thermal lensing(10%) in three 20-30 min runs.

# Power increase sequence from last night

— MEAN

*Actual Trend Data av*

*Trend Ch 2: L1:ASC-QPDX\_DC*



*Trend Ch 1: L1:LSC-SPOB\_MON*

